



Project Title: AN INTEGRATED, WASTEWATER-CENTRIC APPROACH TO WATER QUALITY IMPROVEMENT AND COMMUNITY ENGAGEMENT: Assessing Residential Aerated Treatment Units, Presence of Waterborne Pathogens, and Mosquito Activity

Cooperative Agreement Number: MX-00D68218-0

Dates covered by this report: April 1, 2018 to September 30, 2019

1. Describe the work and measurable outcomes accomplished. Provide specific details with regard to fieldwork scheduled and completed (including photographs, where possible), meetings or conferences conducted or attended.

- The Tulane team members met with Dr. Brady Skaggs and Ms. Gretchen Bonfert on April 25th 2019. The meeting focused on next steps for the project, including project timeline, logistics, and the Institutional Review Board (IRB) application. Ms. Mya Sherman accompanied Dr. Brady Skaggs and other team members from LPBF on a site visit on April 26th. The site visit was used to gather background information and inform the approach for data collection and outreach. Data collection instruments were drafted accordingly for community leader interviews and resident focus groups. Dr. Stephen Murphy, Ms. Sherman, and Dr. Skaggs met on May 16th to discuss the research questions and preparation for the educational outreach campaign.
- Dr. Murphy and Ms. Sherman accompanied Dr. Skaggs on a site visit on June 19th. This site visit focused specifically on the neighborhoods in the Ponchitolawa Creek Watershed. The team also scouted out potential areas to use for participant recruitment for the resident interviews.
- It was determined that individual semi-structured interviews would be a better data collection method with community residents than focus group discussions. A one-page document was sent to Dr. Skaggs on June 3rd with justification for the methodology change.
- The LPBF and Tulane team met to discuss the IRB process and external requests for information. As a result of the meeting, we have outlined a process to address external requests for information.
- Documents for the IRB submission are being prepared, and IRB submission is expected in November 2019. LPBF PI has completed the required training modules necessary for IRB review by Tulane University.

2. Were any problems encountered? If yes, please describe corrective actions taken.

Yes. Over the summer, LPBF received a call from _____, a resident of the Dove Park neighborhood in the project area. _____ requested all applicable data related to the project, specifically the location of homes that have failed inspection and the information related to enteric pathogens. Upon consideration of this request, LPBF identified a potential risk to the project, which may have revealed stigmatizing information regarding results and the consent of people within the project area.

Specifically, LPBF understands after a regulatory review that there are no **Human Subjects** regulations promulgated by the US EPA for human participants, like there are for US HHS and FDA (as promulgated under 45 CFR 46, 21 CFR 50 and 56, and 21 CFR 812 and 312). LPBF understands that human subjects' studies include projects such as:

- Studies that involve human subjects to test or develop devices, products, or materials that have been developed for human use.
- Studies that collect data through intervention or interaction with individuals. Examples of this type of research include the evaluation of teaching methods and programs, internet surveys about alcohol consumption, studies that involve deception, research involving risky behaviors or attitudes, and open-ended interviews with minors about family values in a foreign country that contribute to generalizable knowledge. Data collection using non-identifiable information may be exempt. (Students are advised to discuss with the applicable IRB the process for determining exemptions.)
- Studies *using private information that can be readily identified with individuals, even if the information was not collected specifically for the study in question.*
- Studies that use bodily materials such as cells, blood, urine, tissues, organs, hair, or nail clippings, even if these were not collected for research purposes. However, such research may be considered exempt or Not Human Subjects Research if the materials/data are coded, and the investigator does not have access to the coding systems.
- Studies *that intend to produce generalizable knowledge about categories or classes of subjects from individually identifiable information.*
- Studies that involve retrospective analysis of existing individually-identifiable private information.
- Studies that use human beings to evaluate environmental alterations, for example, weatherization options, habitat modification, temperature, or lighting.

LPBF is concerned that collecting enteric pathogen information, such as the presence of an enteric pathogen at a postal address and GPS location, could potentially stigmatize or harm individuals residing near those areas. It is essential that researchers evaluate whether or not their research could result in potential group harms and, if this is a possibility, take appropriate steps to minimize this risk. Potential harms from research

may affect the group with which the individual is associated, not just the individual who participated in the research.

To mitigate this risk, LPBF has implemented data management protocols to “block data” or report data in a neighborhood or area level, not as the individual or direct postal addresses. By reporting neighborhood or area-level of pathogen presence and failure rates, LPBF looks to mitigate singling out individuals or families with identifiable information.

3. Is the project work on schedule?

LPBF is behind the project timeline and modified the project schedule as noted in *Attachment A*.

4. Document any changes in project management (personnel), and provide the updated contact information.

No changes in project management at LPBF have occurred.

5. Outline the work projected for the next reporting period.

LPBF will be conducting the following work in the next reporting period:

- QAPP is in final review after making modifications related to data management. LPBF will be submitting the QAPP for EPA review in November 2019.
- A field assessment of targeted areas will be performed, including the 20 ATU-utilizing neighborhoods in Ponchitolawa Creek by visual inspection of ditches holding standing sewer water.
- Partners will also evaluate the population demographics, proximity of the ditches to public areas and vulnerable populations, and historic mosquito data from STPMAD (landings, bite data, spray and control data, and epidemiologic data related to disease cases). A matrix will be completed to choose the ten (10) neighborhoods for further ("Phase I") analysis.
- Tulane University will submit project for Community Outreach and Engagement subtask to the university's *Institutional Review Board* (IRB) for the collection of outreach metrics by interview. Approval is anticipated in November 2019.
- Phase I assessments of target areas will also begin, including background data for the pathogen indicators (fecal coliform), adult and larvae mosquito populations, and a suite of enteric pathogens.

Financial Report

Budget to Actual

For the Period of April 01, 2018 – September 30, 2019

	<u>Apr '18 - Sep '19</u>	<u>Budget</u>	<u>\$ Over Budget</u>
Ordinary Income/Expense			
Income			
304 · LPBF Grants & Contracts	36,698.83	412,733.00	(376,034.17)
Total Income	<u>36,698.83</u>	<u>412,733.00</u>	<u>(376,034.17)</u>
Expense			
201 · LPBF Salary & Wages	11,989.75	97,976.00	(85,986.25)
202 · LPBF Fringe Benefits	1,935.43	18,172.00	(16,236.57)
203 · LPBF Indirect	1,887.04	19,595.00	(17,707.96)
204 · LPBF Travel	43.56	3,235.00	(3,191.44)
205 · LPBF Other (Sub-Grantees)	17,496.89	97,545.00	(80,048.11)
206 · LPBF Professional Services	0.00	5,000.00	(5,000.00)
207 · Supplies/Equip(less than)\$5,000	0.00	11,293.00	(11,293.00)
208 · LPBF Contractual	3,346.16	159,917.00	(156,570.84)
Total Expense	<u>36,698.83</u>	<u>412,733.00</u>	<u>(376,034.17)</u>
Net Ordinary Income	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Net Income	<u><u>0.00</u></u>	<u><u>0.00</u></u>	<u><u>0.00</u></u>

* Note: Withdrawal from ASAP.gov for expenses incurred through Sep 30 2019, will be initiated in Nov 2019.

ADMINISTRATION: GOMP PONCHITOLAWA MX00D68218-0

Timeline/Milestones	2019												2020												2021												2022											
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			
QAPP Developed; Approved																																																
	X	X	X	X	X	X	X	X	X																																							
PHASES										PH I - begins 3-1-20												PH II begins 3-1-21												III														
Site Reconnaissance (all partners); Set Ph I & II priorities; Ph III synthesis										X	X	X																																				
Subawardee Invoices 10% ea: Contract & Closeout		X																																														
Subawardee Progress Rpt Due by the 15th for prior month										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Subawardee Invoice due 5th of "X" month for 3 mo. prior																																																
IF COMPLETE, BRADY SUBMITS INVOICES FOR PYMNT BY THE 10TH																																																
6 Mo. Reporting Periods; LPBF report to EPA end of month "X"																																																
LPBF Submits Final Reports to EPA-GOMP by 10-31-22; close-out by 12-31-22																																																
																													</																			

* current project end date

TIMELINE/MILESTONES		2019												2020												2021												2022											
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D				
QAPP Developed; Approved	X	X	X	X	X	X	X	X	X																																								
PHASES																																																	
Site Reconnaissance (all partners); Set Ph I & II priorities; Ph III subbasic																																																	
Water Sample FC Collection & Analysis LPBF -start 3-1-20																																																	
Phase II Home WWTP LPBF Inspect/Assist- start 3-1-21																																																	
Plant/Acquisition; Mosquito & Fish Collection by STPMAD start 3-1-20																																																	
LPBF Collect Samples for TU																																																	
Set-up/Acquisition; test 15 pathogens start 3-1-20-TU																																																	
Planning, Acquisition, & Virtual Focus Groups																																																	
Community Engagement 200+ Residents (TU)																																																	
Communications Strategy w/ "hashtag" campaign (TU)																																																	
Interview Local Leaders; Cite Phase I & II LPBF Data (TU)																																																	
Compile Short- & Long-Term Strategies Report (TU)																																																	
Subwardee Progress Rpt by 15th for prior mo.																																																	
Invoices due 5th of "X" for 3 mo. prior; \$10% start/end																																																	

* current project end date



Project Title: AN INTEGRATED, WASTEWATER-CENTRIC APPROACH TO WATER QUALITY IMPROVEMENT AND COMMUNITY ENGAGEMENT: Assessing Residential Aerated Treatment Units, Presence of Waterborne Pathogens, and Mosquito Activity

Cooperative Agreement Number: MX-00D68218-0

Dates covered by this report: October 1, 2018 to March 31, 2019

1. Describe the work and measurable outcomes accomplished. Provide specific details with regard to fieldwork scheduled and completed (including photographs, where possible), meetings or conferences conducted or attended.

- LPBF finalized subaward agreements with Tulane University (*Attachment A*), and executed a Memorandum of Understanding with St. Tammany Parish Mosquito Abatement District (*Attachment B*).
- LPBF met with partners at Tulane University to discuss the scope of work at the end of the reporting period. After discussion, Tulane has provided the protocols necessary for pathogen analysis and QAPP planning purposes.

2. Were any problems encountered? If yes, please describe corrective actions taken.

3. Is the project work on schedule?

LPBF has been finalizing both subaward agreements for Tulane University and St. Tammany Mosquito Abatement District. However, with execution of the Tulane agreement LPBF is eager to further project progress. LPBF anticipates submittal of the QAPP in the first half of May 2019. A field assessment will be performed in May, with project sampling activities ready to begin after review of the QAPP by EPA.

4. Document any changes in project management (personnel) and provide the updated contact information.

No changes in project management at LPBF have occurred.

5. Outline the work projected for the next reporting period.

LPBF will be conducting the following work in the next reporting period:

- A field assessment of targeted areas will be performed, including the 20 ATU-utilizing neighborhoods in Ponchitolawa Creek by visual inspection of ditches holding standing sewer water. Partners will also evaluate the population demographics, proximity of the ditches to public areas and vulnerable populations, and historic mosquito data from STPMAD (landings, bite data, spray and control data, and epidemiologic data related to disease cases). A matrix will be completed to choose the ten (10) neighborhoods for further ("Phase I") analysis.
- Phase I assessments of target areas will also begin, including background data for the pathogen indicators (fecal coliform), adult and larvae mosquito populations, and a suite of enteric pathogens

	U.S. ENVIRONMENTAL PROTECTION AGENCY Cooperative Agreement		GRANT NUMBER (FAIN): 00D68218	DATE OF AWARD
			MODIFICATION NUMBER: 0	03/12/2018
			PROGRAM CODE: MX	MAILING DATE
			TYPE OF ACTION	03/19/2018
RECIPIENT TYPE: Not for Profit		Send Payment Request to: Las Vegas Finance Center		
RECIPIENT:		PAYEE:		
Lake Pontchartrain Basin Foundation 2045 Lakeshore Drive CERM Bldg. 339 New Orleans, LA 70122 EIN: 72-1152784		Lake Pontchartrain Basin Foundation 2045 Lakeshore Drive CERM Bldg. 339 New Orleans, LA 70122		
PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST		
Dr. Brady Kenyon Skaggs 2045 Lakeshore Drive CERM Bldg. 339 New Orleans, LA 70122 E-Mail: brady@saveourlake.org Phone: 504-836-2235	Danny Wiegand 2510 14th Street Gulfport, MS 39501 E-Mail: wiegand.danny@epa.gov Phone: 228-679-5897	Margaret Crowe Grants and Audit Management Section E-Mail: crowe.margaret@epa.gov Phone: 404-562-8687		
PROJECT TITLE AND DESCRIPTION Gulf of Mexico Program This action provides funding in the amount of \$412,733 for Lake Pontchartrain Basin Foundation to use an interdisciplinary approach to improve surface waters in residential communities utilizing aerated treatment units for wastewater management. The project will assess water quality, waterborne pathogens, and vectors of human diseases and also will correlate these parameters, intervene to improve conditions, and educate area residents and community leaders.				
BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST	
03/01/2018 - 02/28/2021	03/01/2018 - 02/28/2021	\$412,733.00	\$412,733.00	
NOTICE OF AWARD Based on your Application dated 08/03/2017 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$412,733. EPA agrees to cost-share 100.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$412,733. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.				
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)		AWARD APPROVAL OFFICE		
ORGANIZATION / ADDRESS		ORGANIZATION / ADDRESS		
61 Forsyth Street Atlanta, GA 30303-8960		U.S. EPA, Region 4 Gulf of Mexico Program 2510 14th Street Gulfport, MS 39501		
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY				
Digital signature applied by EPA Award Official Keva R. Lloyd - Grants Management Officer				DATE 03/12/2018

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FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$	\$ 412,733	\$ 412,733
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$	\$ 0
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$	\$ 0
Allowable Project Cost	\$ 0	\$ 412,733	\$ 412,733

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.475 - Gulf of Mexico Program	Clean Water Act: Sec. 104(b)(3)	2 CFR 200 2 CFR 1500 and 40 CFR 33

[illegible]

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$97,976
2. Fringe Benefits	\$18,172
3. Travel	\$3,234
4. Equipment	\$0
5. Supplies	\$11,294
6. Contractual	\$159,917
7. Construction	\$0
8. Other	\$102,545
9. Total Direct Charges	\$393,138
10. Indirect Costs: <u>20.00%</u> Base Personnel	\$19,595
11. Total (Share: Recipient <u>0.00</u> % Federal <u>100.00</u> %.)	\$412,733
12. Total Approved Assistance Amount	\$412,733
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$412,733
15. Total EPA Amount Awarded To Date	\$412,733

Administrative Conditions

GENERAL TERMS AND CONDITIONS

The recipient agrees to comply with the current EPA general terms and conditions available at:

<https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-2-2017-or-later>

<https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-3-2016-or-later> These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at <http://www.epa.gov/grants/grant-terms-and-conditions>.

1. ANNUAL FFR (Interim) pursuant to 2 CFR 200.327

Pursuant to 2 CFR 200.327, EPA recipients shall submit an interim annual Federal Financial Report (FFR, SF-425) to EPA no later than 90 calendar days following the anniversary of the award date. The form is available on the internet at:

<http://www2.epa.gov/financial/forms>.

The following reporting period end dates shall be used for interim annual reports: 3/31, 6/30, 9/30, or 12/31.

At the end of the project, the recipient must submit a final FFR to EPA no later than 90 calendar days after the end of the project period. The form is available on the internet at: <http://www2.epa.gov/financial/forms>. All FFRs must be submitted to the Las Vegas Finance Center (LVFC) via email LVFC-grants@epa.gov.

2. UTILIZATION OF SMALL, MINORITY AND WOMEN'S BUSINESS ENTERPRISES

GENERAL COMPLIANCE, 40 CFR, Part 33

The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E

MBE/WBE reporting is required in annual reports. Reporting is required for assistance agreements where there are funds budgeted for procuring construction, equipment, services and supplies, including funds budgeted for direct procurement by the recipient or procurement under subawards or loans in the "Other" category that exceed the threshold amount of \$150,000, including amendments and/or modifications.

Based on EPA's review of the planned budget, this award meets the conditions above and is subject to the Disadvantaged Business Enterprise (DBE) Program reporting requirements. However, if recipient believes this award does not meet these conditions, it must provide [insert Regional or Headquarters point of contact] with a justification and budget detail within 21 days of the award date clearly demonstrating that, based on the planned budget, this award is not subject to the DBE reporting requirements.

The recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis. All procurement actions are reportable, not just that portion which exceeds \$150,000.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the final report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Final reports are due by October 30th or 90 days after the end of the project period, whichever comes first.

The reporting requirement is based on total procurements. Recipients with expended and/or budgeted funds for procurement are required to report annually whether the planned procurements take place during the reporting period or not. If no budgeted procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be sent to:

MBE/WBE reports should be sent to:
R4epagrantsmbewbereporting@epa.gov
and
cc: crowe.margaret@epa.gov
Attn: Margaret Crowe

The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Good Faith Effort requirements as described in 40 CFR Part 33 Subpart C, and Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D and explained below

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D

A recipient must negotiate with the appropriate EPA award official, or his/her designee, fair share objectives for MBE and WBE participation in procurement under the financial assistance agreements.

In accordance with 40 CFR, Section 33.411 some recipients may be exempt from the fair share objectives requirements as described in 40 CFR, Part 33, Subpart D. Recipients should work with their DBE coordinator, if they think their organization may qualify for an exemption.

Accepting the Fair Share Objectives/Goals of Another Recipient

The dollar amount of this assistance agreement, or the total dollar amount of all of the recipient's financial assistance agreements in the current federal fiscal year from EPA is \$250,000, or more. The Louisiana Department of Environmental Quality has negotiated the following, applicable MBE/WBE fair share objectives/goals with EPA as follows:

	MBE	WBE
Construction	23.40%	11.90%
Supplies	1.40%	1.40%
Services	17.10%	12.40%
Goods/Equipment	1.50%	1.40%

By signing this financial assistance agreement, the recipient is accepting the fair share objectives/goals stated above and attests to the fact that it is purchasing the same or similar construction, supplies, services and equipment, in the same or similar relevant geographic buying market as Louisiana Department of Environmental Quality.

Negotiating Fair Share Objectives/Goals, 40 CFR, Section 33.404

The recipient has the option to negotiate its own MBE/WBE fair share objectives/goals. If the recipient wishes to negotiate its own MBE/WBE fair share objectives/goals, the recipient agrees to submit proposed MBE/WBE objectives/goals based on an availability analysis, or disparity study, of qualified MBEs and WBEs in their relevant geographic buying market for construction, services, supplies and equipment.

The submission of proposed fair share goals with the supporting analysis or disparity study means that the recipient is **not** accepting the fair share objectives/goals of another recipient. The recipient agrees to submit proposed fair share objectives/goals, together with the supporting availability analysis or disparity study, to the Regional MBE/WBE Coordinator within 120 days of its acceptance of the financial assistance award. EPA will respond to the proposed fair share objective/goals within 30 days of receiving the submission. If proposed fair share objective/goals are not received within the 120 day time frame, the recipient may not expend its EPA funds for procurements until the proposed fair share objective/goals are submitted.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C

Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with

the six good faith efforts shall be retained:

- (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- (f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302

The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)

Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

3. Indirect Cost Rate for Non-Profit Organizations

- a. If the recipient does not have a previously established indirect cost rate, and is not approved for use of a 10% flat IDC rate, it agrees to prepare and submit its indirect cost rate proposal in accordance with the appropriate federal cost principles, 2 CFR 230,

"Cost Principles for Non-Profit Organizations".

The recipient must send its proposal to its cognizant federal agency within ninety (90) days from the effective date of the award of this assistance agreement. The recipient must carbon copy this EPA office with its proposal.

If EPA is the cognizant federal agency of the non-profit organization, the recipient must send its indirect cost rate proposal within ninety (90) days from the effective date of the award to:

Via Email: OGD_IndirectCost@EPA.GOV

Via Regular Mail: National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, MC 3903R
Washington, DC 20460
Attn: OGD Indirect Cost Rate Control Desk

Via Fedex/UPS: National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1300 Pennsylvania Avenue, NW, 5th Floor
Washington, DC 20004
Attn: OGD Indirect Cost Rate Control Desk

The non-profit recipient agrees to follow the enclosed "Sample Indirect Cost Proposal Format for Nonprofit Organizations." The sample proposal may also be accessed at: <http://www2.epa.gov/grants/sample-indirect-cost-proposal-format-nonprofit-organizations>. Another resource is the "EPA Guide on How to Prepare an Indirect Cost Rate Proposal for a Non-Profit Organization," and may be found at: <http://www2.epa.gov/grants/how-prepare-indirect-cost-rate-proposal-non-profit-organization>

b. Recipients may not draw down indirect costs unless they: i) have a current rate agreement; ii) have been approved for a flat 10% rate; or iii) have submitted, within 90 days of award, an indirect cost rate proposal to their cognizant federal agency for review and approval and a final rate has been determined by the cognizant agency.

c. Recipients are responsible for maintaining an approved indirect cost rate. Recipients with differences between their provisional rates and final rates are not entitled to more than the amount identified in the award for indirect costs without EPA approval.

Programmatic Conditions

A. This is a cooperative agreement because the activities will require substantial federal involvement in the form of programmatic oversight and technical assistance including reviewing and commenting on agreement activities and products.

B. Semi-annual Progress Reports (see Template below) must be submitted to the EPA Project Officer within 30 days after each reporting period ends. Please reference the EPA Cooperative Agreement Number on all reports and correspondence.

Progress Report Template

Project Title:

Cooperative Agreement Number:

Dates covered by this report:

The items listed below should be completely addressed:

1. Describe the work and measurable outcomes accomplished. Provide specific details with regard to fieldwork scheduled and completed (including photographs, where possible), meetings or conferences conducted or attended.
2. Were any problems encountered? If yes, please describe corrective actions taken.
3. Is the project work on schedule?
4. Document any changes in project management (personnel) and provide the updated contact information.
5. Outline the work projected for the next reporting period.
6. **Subaward Reporting:** Report on subaward monitoring activities under 2 CFR 200.331 (d) that were not covered in items 1-5 above. This includes: Summaries of results of reviews of financial and programmatic reports; Summaries of findings from site visits and/or desk reviews to ensure effective subrecipient performance; Environmental results the subrecipient achieved; Summaries of audit findings and related pass-through entity management decisions; Actions the pass-through entity has taken to correct deficiencies such as those specified at 2 CFR 200.331(e), 2 CFR 200.207 and the 2 CFR Part 200.338 Remedies for Noncompliance.

C. Measurable Outputs

The recipient must report to the EPA Project Officer the outputs achieved for the previous six months as well as cumulative outputs achieved over the life of the project by March 31st and September 30th of each year. Outputs are project-specific and must include:

1. number of water bodies and/or segments with 5% improvement in a water quality parameter(s); and
2. number of individuals reached through environmental education/outreach methods.

D. An electronic copy of the Final Performance Report must be submitted to the EPA Project Officer within 90 days after the project end date.

E. Competency of Organizations Generating Environmental Measurement Data

In accordance with Agency Policy Directive Number FEM-2012-02, Policy to Assure the Competency of Organizations Generating Environmental Measurement Data under Agency-Funded Assistance Agreements, Recipient agrees, by entering into this agreement, that it has demonstrated competency prior to award, or alternatively, where a pre-award demonstration of competency is not practicable, Recipient agrees to demonstrate competency prior to carrying out any activities under the award involving the generation or use of environmental data. Recipient shall maintain competency for the duration of the project period of this agreement and this will be documented during the annual reporting process. A copy of the Policy is available online at http://www.epa.gov/fem/lab_comp.htm or a copy may also be requested by contacting the EPA project officer for this award.

F. Prior to environmental data collection or data compilation, a copy of the EPA approved Quality Assurance Project Plan (QAPP) must be submitted to the EPA project officer. A copy of the EPA approved Quality Management Plan (QMP) must also be submitted to the EPA project officer. Environmental data generated under this agreement must be submitted to the EPA project officer, if requested.

G. All geospatial data created must be consistent with Federal Geographic Data Committee (FGDC) endorsed standards. Information on these standards may be found at www.fgdc.gov.

H. Cybersecurity Condition

(a) The recipient agrees that when collecting and managing environmental data under this assistance agreement, it will protect the data by following all applicable State or Tribal law cybersecurity requirements. (b) (1) EPA must ensure that any connections between the recipient's network or information system and EPA networks used by the recipient to transfer data under this agreement, are secure. For purposes of this Section, a connection is defined as a dedicated persistent interface between an Agency IT system and an external IT system for the purpose of transferring information. Transitory, user-controlled connections such as website browsing are excluded from this definition. If the recipient's connections as defined above do not go through the Environmental Information Exchange Network or EPA's Central Data Exchange, the recipient agrees to contact the EPA Project Officer (PO) no later than 90 days after the date of this award and work with the designated Regional/Headquarters Information Security Officer to ensure that the connections meet EPA security requirements, including entering into Interconnection Service Agreements as appropriate. This condition does not apply to manual entry of data by the recipient into systems operated and used by EPA's regulatory programs for the submission of reporting and/or compliance data. (2) The recipient agrees that any subawards it makes under this agreement will require the subrecipient to comply with the requirements in (b)(1) if the subrecipient's network or information system is connected to EPA networks to transfer data to the Agency using systems other than the Environmental Information Exchange Network or EPA's Central Data Exchange. The recipient will be in compliance with this condition: by including this requirement in subaward agreements; and during subrecipient monitoring deemed necessary by the recipient under 2 CFR 200.331(d), by inquiring whether the subrecipient has contacted the EPA Project Officer. Nothing in this condition requires the

recipient to contact the EPA Project Officer on behalf of a subrecipient or to be involved in the negotiation of an Interconnection Service Agreement between the subrecipient and EPA.

Application for Federal Assistance SF-424

*** 1. Type of Submission:**

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

*** 2. Type of Application:**

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

*** 3. Date Received:**

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Lake Pontchartrain Basin Foundation

* b. Employer/Taxpayer Identification Number (EIN/TIN):

72-1152784

* c. Organizational DUNS:

6256042100000

d. Address:

* Street1: 2045 Lakeshore Drive

Street2: Suite 339

* City: New Orleans

County/Parish:

* State: LA: Louisiana

Province:

* Country: USA: UNITED STATES

* Zip / Postal Code: 70122-3454

e. Organizational Unit:

Department Name:

Water Quality

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Dr.

* First Name:

Brady

Middle Name: Kenyon

* Last Name: Skaggs

Suffix: Ph.D.

Title: Water Quality Program Director

Organizational Affiliation:

Lake Pontchartrain Basin Foundation

* Telephone Number: 504-836-2235

Fax Number: 504-383-7818

* Email: brady@saveourlake.org

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*** Other (specify):**

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.475

CFDA Title:

Gulf of Mexico Program

*** 12. Funding Opportunity Number:**

EPA-GM-Cooperative-Agreements-2017-1

*** Title:**

Gulf of Mexico Program Cooperative Agreements 2017

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

AN INTEGRATED, WASTEWATER-CENTRIC APPROACH TO WATER QUALITY IMPROVEMENT AND COMMUNITY ENGAGEMENT:
Assessing Residential Aerated Treatment Units, Presence of Waterborne Pathogens, and Mosquito
Activity

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant LA-002

* b. Program/Project LA-001

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date: 03/01/2018

* b. End Date: 02/28/2021

18. Estimated Funding (\$):

* a. Federal 412,733.00

* b. Applicant

* c. State

* d. Local

* e. Other

* f. Program Income

* g. TOTAL

412,733.00 M.B. 02-15-2018

* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

☒ a. This application was made available to the State under the Executive Order 12372 Process for review on

08/04/2017

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☐ c. Program is not covered by E.O. 12372.

* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)

☐ Yes☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

Ms.

* First Name:

Kristi

Middle Name:

* Last Name:

Trail

Suffix:

* Title:

Executive Director

* Telephone Number:

504-342-2956

Fax Number:

504-383-7818

* Email:

kristi@saveourlake.org

* Signature of Authorized Representative:

Kristi Trail

* Date Signed:

08/03/2017

ENVIRONMENTAL PROTECTION AGENCY (EPA)
FY 2017 Gulf of Mexico Program Cooperative Agreements
EPA-GM-2017-01

Project Title: AN INTEGRATED, WASTEWATER-CENTRIC APPROACH TO WATER QUALITY IMPROVEMENT AND COMMUNITY ENGAGEMENT: Assessing Residential Aerated Treatment Units, Presence of Waterborne Pathogens, and Mosquito Activity

Applicant Information:

Lake Pontchartrain Basin Foundation (LPBF)
2045 Lakeshore Drive, Suite #339, New Orleans, LA 70122
504-836-2235 (504-383-7818 Fax)
Brady Skaggs, Ph.D. brady@saveourlake.org, www.saveourlake.org
DUNS: 625604210

Total Project Cost and EPA Funds Requested: \$412,733

Priority Area: Water Quality Improvement

Secondary Priority Areas: Environmental Education/Outreach, & Strengthening Community Resilience.

EPA Strategic Goal: This project advances EPA Objective 2.2, by restoring, protecting, and sustaining the quality of rivers. Beyond the period of this grant agreement, the goal of this project is to have long-term, positive impact on water quality statewide through the provision of new methods of assessing open water conditions and new communications tools for wastewater infrastructure at residential and regional scales.

Project Description: The proposed project is an interdisciplinary approach to improving surface waters in residential communities utilizing aerated treatment units for wastewater management. The project will assess water quality, waterborne pathogens, and vectors of human diseases. The project will correlate these parameters, intervene to improve conditions, and educate area residents and community leaders.

Measurable Outputs: Creation of an assessment tool for municipalities to prioritize assistance to communities utilizing ATUs; Measurements (at 10 representative sites) and correlations between enteric indicators, pathogens, and mosquito activity; Assistance to and education of 800-900 homeowners with malfunctioning wastewater plants; Community education described below; Five (5) percent improvement in fecal coliform and dissolved oxygen in the Ponchitolawa Creek watershed.

Outreach Component: Diverse outreach strategies include Community focus groups; Individual homeowner education (800-900 homeowners); Community presentations; Homeowner/citizen science toolbox Online/social media (blogs, podcasts, etc.); and a Long-Term Strategies report.

Place of Performance: St. Tammany Parish, Louisiana (Lower Tchefuncte Watershed).

HUC Waterbody: Louisiana Coastal Watershed – HUC 08090201 (LDEQ Subsegments LA 040808 and 040802)

Project period: 03/01/2018 to 02/28/2021

Section 1. Project Summary and Overall Approach

A. DETAILED PROJECT DESCRIPTION:

This project addresses a pervasive water quality problem in rural and developing areas of Louisiana by bringing an interdisciplinary approach to one watershed in southeast Louisiana. The root of the surface water problem is a permissive state policy allowing high density developments of single family residences equipped with Aerated Treatment Units (ATUs) for wastewater management. This situation is compounded by impervious clay soils and annual average rainfall of approximately 60 inches per year statewide.

Home ATU systems have a high failure rate nationally, and LPBF has observed neighborhood failure rates exceeding the national average greater than 60% of the installed systems. Louisiana's topography and geological conditions, when coupled with failed systems, can lead to stagnating, untreated wastewater in drainage ditches in homeowners' front yards. Fecal coliform, as an enteric pathogen indicator, can be measured to quantify the presence of fecal waste material from warm-blooded animals and sewage pollution. However, the scientific literature casts doubt that fecal coliform may be a sufficient indicator to warn of the presence of disease-causing enteric pathogens for all environmental conditions. This public health problem merits examination in Louisiana.

Effluent produced by improperly maintained ATUs discharging into drainage ditches may enhance mosquito production, and therefore, the possibility of increased pathogen transmission by mosquitoes. Frequently malfunctioning residential ATUs and open, poorly-draining ditches together exacerbate the production of West Nile Virus (WNV) vector mosquitoes.

The proposed project area, Ponchitolawa Creek Watershed, drains approximately 9,441 acres in St. Tammany Parish and is a tributary of the Lower Tchefuncte River, which flows into Lake Pontchartrain (Figure 1). As a tributary of the Tchefuncte River, Ponchitolawa Creek is designated a Scenic River by the Louisiana Legislature and the Louisiana Department of Wildlife and Fisheries (LDWF) and is considered an Outstanding Natural Resource Water (ONRW) by the Louisiana Department of Environmental Quality.

On the Lower Tchefuncte River, low levels of dissolved oxygen were identified by the Louisiana Department of Environmental Quality as likely related to numerous individual commercial package plants and individual residential treatment units discharging within the watershed. Stream segments have been on the impaired waters list since 2012, for low dissolved oxygen.

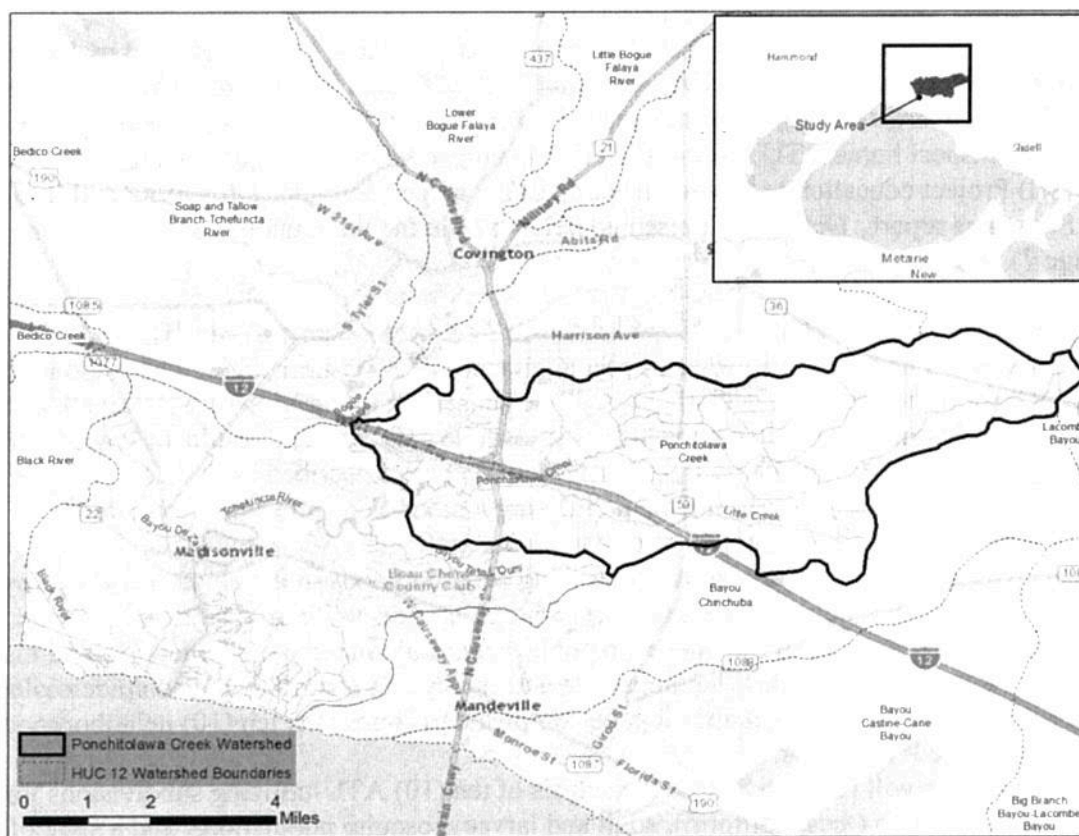
The project watershed is within St. Tammany Parish, which has a watershed management plan developed by the Louisiana Coastal Protection and Restoration Authority that identified:

- 20 subdivisions are not connected to community or centralized wastewater treatment systems;
- More than 1,686 residences that have septic tanks or Aerated Treatment Units (ATUs),
- 800¹ homes (2,400 persons) are in Low to Moderate Income (LMI) neighborhoods.

Past LPBF research has shown a high percentage of home wastewater systems to be malfunctioning in the project area. In addition, recent LDEQ monthly water quality monitoring on Ponchitolawa Creek (2013-2016) has shown sites at I-12 and at Hwy 59 do not meet new *Use and Attainability Analysis* (UAA) Dissolved Oxygen (DO) criteria applicable to this area. Louisiana Department of Environmental Quality ambient water quality monitoring data will serve as the baseline for this project.

¹ 800 high-need LMI residences * 3 persons per home = 2,400 LMI persons impacted

Figure 1. Project Location: Ponchitolawa Creek Watershed



To improve water quality in intervention neighborhoods, this project's multi-disciplinary approach will remediate pollution sources, determine whether disease-causing agents are present in standing water; monitor dissolved oxygen and fecal coliform; quantify changes in mosquito populations; and increase the capacity of homeowners and community leaders to embrace their wastewater responsibilities.

Project partners are the Lake Pontchartrain Basin Foundation, with 17 years' experience in wastewater management and 28 years' experience overall improving water quality in southeast Louisiana; the St. Tammany Parish Mosquito Abatement District, with vector-borne disease ecology and mosquito control; the University of Alabama, with emphasis on wastewater and sanitation engineering challenges; and the Georgia Institute of Technology, with detection methods for waterborne pathogens affecting human health.

Two types of tools will result from this project: 1) a reconnaissance and intervention methodology resulting in at least 5% improvement in fecal coliform and dissolved oxygen in Ponchitolawa Creek, and 2) a communication methodology (and materials) that could be replicated across Louisiana and other states. This project advances EPA's 2014-2018 Strategic Plan by supporting progress toward Goal 2 ("Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems") and Goal 3 ("Objective 3.1: Promote Sustainable and Livable Communities").

Through his project, LPBF proposes to substantially decrease waste material entering ditches in targeted neighborhoods in Ponchitolawa Creek. In reducing these non-point source inputs, LPBF seeks to gain at least a 5% improvement in DO and fecal coliform in Ponchitolawa Creek (much greater improvements are expected), which will ultimately improve low DO conditions in the Lower Tchefoncté. The project will also produce an innovative reconnaissance matrix to target neighborhoods in need of assistance, educational materials, and a long-term strategy plan for municipalities, stakeholders, and homeowners.

B. ACTION PLAN, TIMELINE AND MILESTONES

Project activities are broken into three phases I) A reconnaissance phase to be conducted by LPBF and project partners University of Alabama (UA), Georgia Tech (GT), and St. Tammany Mosquito Abatement District (STPMAD) to create a decision tool/matrix; II) An intervention phase to be conducted by LPBF and STPMAD to inspect home ATU's and assist/educate homeowners while quantifying improvements to ditches; and III) Project education to be conducted by LPBF and a contractor throughout and leading to a Long-term Strategies report. Details are presented below and in the timeline/milestones chart shown in Table 1 (page 7).

Task 1: Assessment of ATU-Utilizing Neighborhoods in Ponchitolawa Creek Watershed

Task 1 corresponds to Phase I of this project, a reconnaissance of ATU-utilizing neighborhoods in the Ponchitolawa Creek Watershed. Neighborhoods will be chosen for monitoring of water quality parameters, enteric pathogen indicators, a suite of pathogens, and mosquito activity. The results of Phase I will be utilized to choose subdivisions for Phase II, the intervention phase, described in Task 2.

- a) LPBF will create a QAPP detailing the monitoring methodology and sites associated with this project prior to the commencement of any sampling activities.
- b) Project partners will assess the 20 ATU-utilizing neighborhoods in Ponchitolawa Creek by visual inspection of ditches holding standing sewer water. Partners will also evaluate the population demographics, proximity of the ditches to public areas and vulnerable populations, and historic mosquito data from STPMAD (landings, bite data, spray and control data, and epidemiologic data related to disease cases). A matrix will be completed to choose the ten (10) neighborhoods for further ("Phase I") analysis.
- c) Project partners will perform "Phase I" analysis of ten (10) ATU-utilizing subdivisions for enteric pathogen indicators (fecal coliform), adult and larvae mosquito populations, and a suite of pathogens through the Luminex x-Tag system. The Luminex system will detect the presence of gastrointestinal and other waterborne diseases, including: *Campylobacter*, *Clostridium difficile* (Toxin A/B), Enterotoxigenic *E. coli* (LT/ST), Siga-like toxin producing *E. coli* (STEC), *Salmonella*, *Shigella*, *Vibrio cholera*, *Giardia*, Norovirus GI/GII, Rotavirus, *E. coli* O157H7, *Yersinia Enterocolitica*, Adenovirus 40/41, *Cryptosporidium*, *Entamoeba histolytica*. Each site will be sampled ten (10) times, roughly monthly, over the course of a year. Water Quality measurements will be collected for pH, DO, conductivity, temperature, and turbidity.
- d) Concurrent to monitoring described in (c), the presence of immature (larvae and pupae) mosquitoes and fish predators and water quality parameters will be monitored for correlation with condition of individual residence's sewage treatment system via multiple linear regression. This data will be collected for one month at approximately 400 individual residences.
- e) Data obtained from activities (c) and (d) will be statistically analyzed and mapped. The results will determine which neighborhood(s) will be targeted for Phase II- Intervention.

Task 2: Phase II- Intervention Program in an ATU-Utilizing Neighborhood

LPBF will conduct home ATU inspections within neighborhood(s) targeted from Task 1.

- a) LPBF will coordinate with St. Tammany Parish to notify the targeted neighborhood(s) of the inspection program through the use of door-hangers and neighborhood signage.
- b) The inspection process for each home ATU will include:
 - Collection of information on the size and type of each system, condition of the system, street address, and GPS coordinates of the system's location.
 - When a unit is reported as non-functioning, the inspector will note which components have failed and need to be repaired. A copy of the inspection form will be given to the homeowner. A re-inspection will be conducted thirty days later.

- Inspectors will educate the homeowners about the functionality of their system. The homeowners will be given an LPBF-produced brochure with information about the upkeep and maintenance of the system. Information will be given to the homeowner about possible financial assistance for repairs.

This proposal assumes that LPBF will conduct an approximate maximum of 100 ATU per month, for a total of 800-900 within the project.

- To document water quality improvements through the intervention, LPBF will monitor up to 10 sites monthly within the targeted neighborhood for water quality parameters (e.g.: fecal coliform, DO) and project partners GT and AU will re-conduct sampling detailed in Phase I to assess changes due to the intervention.
- Concurrent with the inspection program, STPMAD will further assess mosquito populations. In the selected intervention neighborhood(s) and in a similar neighborhood not scheduled for remediation (the control), STPMAD will sample adult mosquitoes prior to and after the intervention to determine the effect of the intervention on the production of adult mosquitoes. Emergence traps, designed to sample mosquitoes that reproduce in an aquatic habitat, and adult mosquito traps, which sample free-flying mosquito populations, will be used in this pre/post intervention study. In addition, water quality parameters and presence/absence of mosquito predators will be measured and noted.

Task 3: Community Education and Outreach

LPBF will develop strategies and materials to deliver outreach and education programming to nearby communities. Key messages will include explaining the project and its goals, the science behind water quality, and the roles of individuals in risk-reduction and water quality. A primary goal of the education and outreach component is to raise awareness of individual responsibilities, and to encourage support of investment in public infrastructure, health, and water quality.

- Project partners will use their collective expertise and conduct two focus groups at the beginning of the project to gain feedback in understanding the wastewater/mosquito/ditch issues of inhabitants in the watershed. The results of the focus groups will be used to inform education and outreach for the remainder of the project.
- LPBF estimates it will interact with 200+ diverse residents by preparing and performing twelve (12) educational presentations for schools, neighborhood associations, churches, and business groups within the watershed. The aim will be to catalyze a Citizen Science program for residents to understand more about their immediate environment and steps they can take to monitor, mitigate, and remediate wastewater and mosquito issues.
- LPBF will create a content strategy for social media, to be placed on all partners' platforms to include: six blog posts; three podcasts; a minimum of twenty unique 140 character (or less) posts for social media platforms (such as Twitter, LinkedIn, Facebook, etc). Connectivity will be facilitated by development of a primary "#hashtag" campaign.
- LPBF will disseminate information via media connections with news articles, press releases, and interviews for traditional media outlets
- LPBF will prepare a Home-Wastewater Strategy Report and Educational toolbox through analysis of the Phase I and II data and results and conducting interviews of community leaders.

C. BENEFITS and AUDIENCE:

This project will benefit homeowners and citizens in the Ponchitolowa Watershed by improving water quality in residential neighborhoods served by ATUs- many of which are demographically classified as LMI. The improved water quality will reduce the risk of water-borne pathogens and mosquito-borne disease vectors. Citizens will also benefit from education on wastewater and water quality issues. Finally, municipalities will benefit from the tools and strategies report developed through this project.

D. ROLES, RESPONSIBILITIES, and EXPERIENCE:

The co-leads on the project will be:

- Dr. Brady Skaggs, Water Quality Program Director LPBF- PhD in Environmental Health Sciences from the Tulane University School of Public Health and Tropical Medicine.
- Dr. Kevin Caillouet, Research Entomologist, STPMAD- PhD in Tropical Medicine from the Tulane University School of Public Health and Tropical Medicine.
- Dr. Mark Elliot, Assistant Professor, UA Civil, Construction, and Environmental Engineering- PhD in Environmental Engineering from the University of North Carolina at Chapel Hill.
- Dr. Joe Brown, Assistant Professor, GT Environmental Engineering- PhD Environmental Sciences and Engineering from the University of North Carolina at Chapel Hill Gillings School of Global Public Health.

The experience, roles and responsibilities of each organization are described below:

Lake Pontchartrain Basin Foundation (LPBF)- The mission of LPBF is to restore and preserve the Pontchartrain Basin for the benefit of this and future generations. LPBF will be the principal investigator, responsible for overall execution of the project, oversight of sub-grantees and contractors, and will conduct the water quality monitoring and aerated treatment unit inspection and recommendations for improvement.

St. Tammany Parish Mosquito Abatement District (STPMAD)- STPMAD actively engages in research projects designed to improve technology and methodology, as well as increase understanding of mosquito borne disease epidemiology and mosquito biology. STPMAD will be responsible for assessments of larval and adult mosquito populations as well as predators in Phases I and II.

University of Alabama, Tuscaloosa (UA)- Dr. Mark Elliot places emphasis on understanding the challenges and opportunities of water and sanitation engineering in resource-poor communities. UA will be responsible for sample collection for Luminex analysis in Phases I and II.

Georgia Institute of Technology (GT)- Dr. Joe Brown's research and teaching interests are at the intersection of environmental engineering and public health, including detection methods for pathogens and pathogen indicators in the environment, water treatment technology characterization and innovation, and human health effects of exposure to waterborne pathogens. GT will perform the Luminex analysis in Phases I and II.

E. ENVIRONMENTAL DATA STATEMENT:

LPBF maintains an active and mature quality management system. LPBF acknowledges that a statement demonstrating institutional competency will need to be provided prior to beginning work. A QAPP will be required for this project which will detail the locations, frequency of sampling, parameters, analytical methods, statistical methods, and quality assurance procedures and reporting.

Table 1. Timelines & Milestones Chart

Milestone																												
	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	
				PHASE I												PHASE II												
QAPP Developed; Approved	X	X	X																									
Partner Coordination	X			X					X						X						X							
Water Sample FC Collection & Analysis				X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		
UA Collect Samples, GT Test 15 Pathogens				X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		
Mosquito & Fish Collection by STPMAD				X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		
Home WWTP Inspections and Assistance- LPBF															X	X	X	X	X	X	X	X	X	X	X	X		
Focus Groups	X	X	X	X	X	X																						
Community Outreach														Throughout Project - 12 Presentations														
Social Media/ Online														Throughout Project- 3 Podcasts, 6 Blogs, 20+ Unique Tweets														
Presentations to Stakeholders													X													X		
Long-Term Strategies Report														Research/ Interviews Throughout Project														
Semi-Annual Reports						X						X					X						X					
Final Report Developed; Approved																												

Section 2. Environmental Results—Outcomes, Outputs, Project Performance Measures

A. OUTPUTS AND OUTCOMES

Table 2. Outputs and Outcomes Chart

Anticipated Outputs and Outcomes of LPBF Project in the Ponchitolawa Watershed in SE Louisiana (HUC 08090201)		
Activities (and associated project Phase)	Outputs	Outcomes
Focus groups of residents convened in the watershed discuss conditions related to wastewater system function and quality of life, open water and mosquitoes (Phase III)	50 persons contacted to engage 10 participants in two groups (20 total)	Insights for project partners aid all phases, including the design of educational materials
Qualitative assessment of 20 neighborhoods' landscape, open water conditions, and history of mosquito data and treatment (Phase I)	Selection of 10 neighborhoods for analysis	Insights for partners about inter-related land and water factors
Analysis of data from standing water sites in residential neighborhoods: fecal coliform bacteria counts; presence of waterborne pathogens; mosquito quantity/activity; and presence of mosquito-eating fish (Phase I)	Water and pathogen data collected 10 times in 10 neighborhoods; mosquito, fish data from broad area	A new tool for gauging the condition of standing water affecting public health and the degree of need for interventions
In intervention neighborhoods, provision of technical assistance to homeowners for aerated treatment units (ATUs): instruction, repairs if possible, and guidance on financial aid for replacing ATU; pre-and post- mosquito population assessment (Phase II)	800-900 residents become aware of their roles managing wastewater; new mosquito trend data	Raw sewage reduced; increased homeowner capacity to manage ATUs in the future; correlation with mosquito activity known
Monthly measurement of dissolved oxygen (DO) downstream of homeowners receiving technical assistance (Phase II)	Water quality data (12 month) at up to 10 sites in targeted subdivisions and receiving streams	Five percent improvement in fecal coliform and Dissolved Oxygen
Implement education/communications campaign using social media (Facebook, Instagram, LinkedIn, Twitter) and print media: press releases, interviews, articles; also interview community leaders (Phase III)	3 podcasts, 20 posts by 4 partners, contractor= 115 communications; interviews	New understanding among the public and environ. professionals in partner states (LA, GA, AL) and beyond
Educational presentations and printed materials for schools, neighborhood associations, churches, business groups in the watershed, as well as the St. Tammany Parish Water Task Force (Phase III)	Learning by 200 residents and civic leaders, as well as project partners	Long term strategies to improve water quality: assess/remediate ATUs and raise profile of community infrastructure need

B. PROJECT PERFORMANCE:

Dr. Brady Skaggs, LPBF Water Quality Program Director, will prepare the QAPP for this project. He will coordinate closely with LPBF's Business/Program & Grants Manager and provide active grant management, including oversight of sub-grantees, partners, contractors and/or vendors.

Section 3. Applicant Capability and Past Performance

LPBF has successfully managed EPA awards totaling more than \$10 million since the 1990s from the federal level, Region 6, the Gulf of Mexico Program (GOMP; Region 4), and Urban Waters Federal Partnership. LPBF also successfully administers EPA grants and contracts through the Pontchartrain Restoration Program (PRP, administered by University of New Orleans-UNO) and the LDEQ Non-Point Source 319 Program, respectively. Highlights include:

- LPBF's successfully completed a \$127,430 grant from GOMP in 2010 (Grant ID# MX96448606); reported progress quarterly; and included a presentation in the final report.
- LPBF's successfully completed a \$303,431 grant from GOMP in 2013 (Grant ID# MX 95458810); provided \$193,000 match; quarterly reports; and presentation in the final report.
- GOMP awarded a \$300,000.00 grant in 2014 to continue & expand water quality monitoring & reporting for two years (Grant ID# MX 00018514). LPBF is providing a \$127,952 match. A supplement of \$100,014.00 was awarded in April 2017, which has a balance of \$83,395.30 as of June 30, 2017. LPBF has provided semi-annual reports during this project; the next report will cover the period of April-September 2017.

Section 4. Expenditures of Awarded Grant Funds

Following notification from USEPA that a grant award will be made, LPBF will execute sub-grant agreements with the sub-grantees: St. Tammany Parish Mosquito Abatement District (STPMAD), University of Alabama (UA), and Georgia Institute of Technology (GT). LPBF will initiate a competitive bid process for contractual services needed. Chosen contractors will be retained through binding agreements that encompass compliance with relevant regulations, frequency of invoice submittal to LPBF for payment, and accountability for project performance. LPBF's legal counsel will approve the sub-grant agreements and contracts. LPBF's Business/Program & Grants Manager will handle all grant expenditures, agreement documents, and financial transactions with sub-awardees and contractors, in close coordination with the project manager: LPBF's Water Quality Program Director. LPBF personnel will record project hours worked and related expenses using NetChex Payroll Services and established administrative procedures for expense reimbursement.

Section 5. Budget Detail

The total project cost of \$412,733 is respectfully requested from the US EPA Gulf of Mexico Program. Full budget details are presented on the following page.

Line Item and Itemized Cost - Three Year Budget	EPA Funding
Personnel	
LPBF Water Quality Director (FTE 40 Hrs/wk, \$35.96383/Hr): 10%YR 1, 19%YR 2, 10% YR 3	\$ 28,771.07
LPBF Water Quality Field Coordinator (FTE 40 Hrs/wk, \$25.0477/Hr): 2.4%YR 1, 9.6%YR 2, 2.4% YR 3	\$ 7,514.31
LPBF Water Quality Specialist (FTE 32 Hrs/wk, \$18.61679/Hr): 3%YR 1, 60%YR 2, 6% YR 3	\$ 21,409.31
LPBF Home System Inspector(PTE20 Hrs/wk,\$16.275/Hr): 100%YR2	\$ 16,275.00
LPBF GIS Specialist (FTE 32 Hrs/wk, \$18.27967/Hr) 150 Hrs: 3% Yr 1, 6% Yr 2)	\$ 2,741.95
LPBF Business/Grant Manager (FTE 40 Hrs/wk, \$29.20956/Hr): 18%YR 1, 10%YR 2, 10% YR 3)	\$ 21,264.56
TOTAL PERSONNEL	\$ 97,976
Fringe Benefits – 21.45802% of \$97,976.22 LPBF Salary & Wages	
FICA, Unemployment, Workers Comp, Health, Life Insurance, Short & Long Term Disability Insurance, 401K Match	\$ 18,171.78
TOTAL FRINGE BENEFITS	\$ 18,172
Travel – In-state travel by vehicle	
Mileage 15,748 LPBF personnel@\$0.535/mi; 100 Bridge tolls @ \$5	\$ 3,234.12
TOTAL TRAVEL	\$ 3,234
Supplies	
LPBF Field Supplies	\$ 11,294
TOTAL SUPPLIES	\$ 11,294
Contractual	
Laboratory Analysis	\$ 6,000.00
Reconnaissance of Neighborhoods; Community Education/Outreach	\$118,415.00
Wastewater Technician	\$ 31,752.00
Graphic Artist	\$ 3,750.00
TOTAL CONTRACTUAL	\$159,917.00
Other	
LPBF Legal Counsel	\$ 5,000.00
St. Tammany Parish Mosquito Abatement District	\$ 36,000.00
University of Alabama Phase I and II	\$ 18,587.00
Georgia Institute of Technology Phase I and II	\$ 37,758.00
Printing (Brochures, Door Hangers)	\$ 5,200.43
TOTAL OTHER	\$102,545
Indirect Charges	
Federal Negotiated Indirect Cost Rate = 20% X Personnel	\$ 19,595.24
TOTAL INDIRECT	\$ 19,595
TOTAL PROJECT COST	\$412,733.00

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** ("**MOU**") is made and entered into this 25th day of July, 2018 (the "**Effective Date**") by and among **The Lake Pontchartrain Basin Foundation** ("**Foundation**" or "**LPBF**"), a 501(c)(3) not-for-profit, non-governmental organization located in Louisiana and having an address at 2045 Lakeshore Drive, Suite 339, New Orleans, LA 70122 and **The Administrators of the Tulane Educational Fund d.b.a Tulane University through the Tulane School of Public Health and Tropical Medicine** ("**Tulane**") that is a not-for-profit company located at 1440 Canal Street, New Orleans, Louisiana, 70112 (Tulane and Foundation collectively are referred to as the "**Parties**") who enter into this MOU consistent with the terms, conditions and mutual covenants as set forth below:

RECITALS

WHEREAS, both Parties acknowledge the importance of establishing cultural, educational, and scientific relations in order to further their institutional aims; and

WHEREAS, both Parties share a common interest in developing education, research and learning in various fields; and

WHEREAS, it is in the best interest each Party to obtain the assistance of the other Party in the pursuit of the objectives and goals enumerated in this MOU; and

WHEREAS, the Parties possess the facilities and personnel necessary to pursue the objectives and fulfill the requirements of this MOU; and

NOW, THEREFORE, in consideration of the foregoing premises and the terms and conditions contained in this MOU, the Parties agree as follows:

ARTICLE 1 SCOPE & PURPOSE

1.1 PURPOSE. It is in the interest of the Parties to explore possible collaborations on curriculum development, teaching, research projects and exchanges of faculty, staff, students, information and experiences in several areas of public health. This MOU will facilitate increased cooperation between Foundation and Tulane for the purpose of facilitating collaborating in current and future funded projects, and to assist in identifying and evaluating other opportunities that would improve public health for the residents of the Pontchartrain Basin.

1.2 SCOPE. Tulane and Foundation desire to promote the following activity, which may be formally developed by means of a separate legally binding agreement between the Parties:

- I. Through this MOU, Tulane and the Foundation intend to collaborate to enhance awareness of community partnership opportunities in the New Orleans and surrounding areas highlighting efforts to protect public health. The Parties recognize that there are many possible areas in which enhanced cooperation could be beneficial and therefore may agree to work to enhance cooperation in other areas without amending this MOU;
- II. Explore possible collaborations on curriculum development, teaching, research projects and exchanges of information and experiences in several areas of public health;
- III. Seek to improve understanding between their respective institutions and to establish mutually beneficial collaborations benefiting their students, scholars, faculty, and employees; and

IV. Enhance coordination, when applicable and appropriate, in the areas of water quality, habitat restoration, community resilience, environmental education, and environmental justice.

1.3 **FUNDING.** The Parties acknowledge that this MOU does not in and of itself effectuate the transfer of monies between the Parties, and, as such, the Parties acknowledge and agree to enter into additional legally binding agreements as desired and appropriate on an activity-specific basis.

1.4 **COMPLIANCE.** Tulane and Foundation agree to conduct all activities undertaken pursuant to this MOU in accordance with all applicable federal, state and local laws, regulations, and guidance.

ARTICLE 2

TERM OF MOU

2.1 The term of this MOU shall be three (3) years ("Term"), commencing on the Effective. The MOU shall renew upon the express written consent of both Parties. At any given time, any Party may, in its sole discretion, terminate this MOU with or without cause by giving the other Party at least sixty (60) days' prior written notice.

ARTICLE 3

RELATIONSHIP OF PARTIES

3.1 It is expressly understood and agreed that, in the performance of activities contemplated by this MOU, Foundation and Tulane will at all times act as independent contractors with respect to each other, and not as an employee, agent, or faculty member of one another. Nothing contained in this MOU will be construed to create a joint venture, partnership, association, or other affiliation or like relationship between the Parties. In no event will the Parties be liable for the debts or obligations of one another, except as otherwise specifically provided in this MOU.

ARTICLE 4

MISCELLANEOUS PROVISIONS

4.1 **ENTIRE MOU; MODIFICATION.** This MOU contains the entire understanding of the Parties with respect to the subject matter hereof and supercedes all prior MOUs, oral or written, and all other communications between the Parties relating to such subject matter. This MOU may not be amended or modified except by mutual written agreement among the Parties.

4.2 **NOTICE.** Any notice required to be given under this Agreement by either Party will be in writing and sent to the other Party by either hand delivery or certified mail return receipt requested as follows:

If to Tulane:

Thomas LaVeist
Dean, Tulane School of Public
Health and Tropical Medicine
1440 Canal Street
New Orleans, LA 70112

With copy to:

Victoria Johnson, General Counsel
Tulane University
300 Gibson Hall
New Orleans, LA 70118

If to Foundation:

Kristi Trail, P.E.
Executive Director
Lake Pontchartrain Basin Foundation
PO Box 6965
Metairie, LA 70009

With copy to:

Stephen Conroy, General Counsel.
Conroy Law Firm
Three Lakeway Center
3838 N. Causeway Blvd., STE 3130
Metairie, LA 70002

- 4.3 LIAISONS.** To facilitate communications between the Parties, each Party will designate an individual to serve as a primary contact and otherwise liaise with the other Party:

For Foundation:

Name: Brady K. Skaggs, Ph.D.
Title: Water Quality Program Director
E-mail: brady@saveourlake.org
Phone: (504) 442-3602

For Tulane:

Name: Maureen Lichtveld, M.D.
Title: Chair, GEHS
E-Mail: mlichtve@tulane.edu
Phone: (504) 988-5953

- 4.4 COUNTERPARTS.** This MOU may be executed in one or more counterparts, all of which together shall constitute only one MOU.

IN WITNESS WHEREOF the Parties have executed this MOU in two originals in equal meaning and content and the Parties agree that this MOU represents their intention in relation to the activities described herein.

**THE LAKE PONTCHARTRAIN BASIN
FOUNDATION**

**THE ADMINISTRATORS OF THE TULANE
EDUCATIONAL FUND THROUGH THE
TULANE SCHOOL OF PUBLIC HEALTH
AND TROPICAL MEDICINE**

By: Kristi Trail

Name: Kristi Trail, P.E.
Title: Executive Director

Date: 07-25-2018

By: LuAnn E. White

Name: LuAnn E. White, PhD, DABT
Title: Senior Associate Dean

Date: 07-25-18

Timeline/Milestones

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Tulane University Scope of Work

TASK 1 - Laboratory

- LPBF will assess the 20 ATU-utilizing neighborhoods in Ponchitolawa Creek by visual inspection of ditches holding standing sewer water; Tulane University (TU) partners can also participate. Partners will also evaluate the population demographics, proximity of the ditches to public areas and vulnerable populations, and historic mosquito data from STPMAD (landings, bite data, spray and control data, and epidemiologic data related to disease cases). A matrix will be completed to choose ten (10) neighborhoods for further ("Phase I") analysis.
- TU will perform "Phase I" analysis of ten (10) ATU-utilizing subdivisions over the course of a year (no less than 10 months) for fecal indicators (fecal coliform), and a suite of enteric pathogens (Campylobacter, Enterotoxigenic *E. coli* (LT/ST), Shiga-like toxin producing *E. coli* (STEC), Salmonella, Shigella, Vibrio cholera, Norovirus GI/GII, Rotavirus, *E. coli* O157H7, Adenovirus 40/41) using quantitative PCR system. Water Quality measurements will be collected for pH, DO, conductivity, temperature, and turbidity. LPBF staff will collect water samples and transport immediately to Dr. Sherchan's laboratory in a cooler (1440 Canal St, Suite 2100, New Orleans, LA, 70112).
- To document water quality improvements through the intervention, LPBF will collect samples from the 10 sites (monthly, detailed in Phase I) within the targeted neighborhoods for water quality parameters for fecal indicator analysis of samples in Phase II to assess changes due to the intervention program.

TASK 2 - Community Engagement

- Conduct two focus groups at the beginning of the project to gain feedback in understanding the wastewater/mosquito/ditch issues of inhabitants in the watershed. The results of the focus groups will be used to inform education and outreach for the remainder of the project.
- Engage an estimated interaction with 200+ diverse residents: prepare and perform twelve educational presentations for schools, neighborhood associations, churches, and business groups within the watershed. The aim will be to catalyze a Citizen Science program for residents to understand more about their immediate environment and steps they can take to monitor, mitigate, and remediate wastewater and mosquito issues.
- Create and provide a content strategy for social media, to be placed on all partners' platforms to include: six blog posts; three podcasts; a minimum of twenty unique 140 character (or less) posts for social media platforms (such as Twitter, LinkedIn, Facebook, etc). Connectivity will be facilitated by development of a primary "#hashtag" campaign.
- Prepare and assist with the dissemination of information via media connections with news articles, press releases, and interviews for traditional media outlets.
- Prepare and provide to LPBF a *Home-Wastewater Strategy Report*, educational toolbox for homeowners, and a handbook for local government through the analysis of results from Phase I and II data and interviews conducted with community leaders.

FDP Fixed Price Research Subaward Agreement

Federal Awarding Agency: Environmental Protection Agency (EPA)

Pass-Through Entity (PTE):

Lake Pontchartrain Basin Foundation

Subrecipient:

The Administrators of the Tulane Educational Fund

PTE PI: Brady Skaggs, Ph.D.

Sub PI: Maureen Lichtveld, M.D., MPH

PTE Federal Award No: MX-00D68218-0

Subaward No: FPSA01-MX00D68218

Project Title: Gulf of Mexico Program

Subaward Period of Performance (Budget Period):

Start: 01/01/2019 End: 08/31/2021

Amount Funded This Action (USD): \$ 174,760.00

Estimated Project Period (if incrementally funded):

Start: End:

Incrementally Estimated Total (USD): \$

Terms and Conditions

1. PTE hereby awards a fixed price Subaward, as described above, to Subrecipient. The Statement of Work and budget for this Subaward are as shown in Attachment 5. In its performance of Subaward work, Subrecipient shall be an independent entity and not an employee or agent of PTE.
2. PTE shall provide funding in accordance with the Payment Schedule shown in Attachment 5. All invoices shall be submitted using Subrecipient's standard invoice, but at a minimum shall include the deliverable completed and milestone payment amount, Subaward number, and certification, as required in 2 CFR 200.415 (a). Invoices that do not reference PTE Subaward number shall be returned to Subrecipient. Invoices and questions concerning invoice receipt or payments shall be directed to the appropriate party's Financial Contact, shown in Attachment 3A.
3. A final invoice, marked "FINAL" must be submitted to PTE's Financial Contact, as shown in Attachment 3A, not later than 60 days after the Project Period. PTE shall make the final payment to Subrecipient upon completion of all required deliverables and reports as indicated in Attachments 4 and 5.
4. Upon the receipt of proper invoices, the PTE agrees to process payments in accordance with this Subaward and 2 CFR 200.305.
5. Matters concerning the technical performance of this Subaward shall be directed to the appropriate party's Principal Investigator as shown in Attachments 3A and 3B. Technical reports are required as shown in Attachment 4.
6. Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this Subaward, and any changes requiring prior approval, shall be directed to each party's Authorized Official Contact, as shown in Attachments 3A and 3B. Any such change made to this Subaward requires the written approval of each party's Authorized Official, as shown in Attachments 3A and 3B.
7. The PTE may issue non-substantive changes to the Period of Performance and budget Bilaterally. Unilateral modification shall be considered valid 14 days after receipt unless otherwise indicated by Subrecipient when sent to Subrecipient's Authorized Official Contact, as shown in Attachment 3B.
8. Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.
9. Either party may terminate this Subaward with 30 days written notice to the appropriate party's Principal Investigator Contact, as shown in Attachments 3A and 3B. PTE shall pay Subrecipient for termination costs as allowable under Uniform Guidance, 2 CFR 200, or 45 CFR Part 75 Appendix IX, as applicable.
10. By signing this Subaward, including the attachments hereto which are hereby incorporated by reference, Subrecipient certifies that it will perform the Statement of Work in accordance with the terms and conditions of this Subaward and the applicable terms of the Federal Award, including the appropriate Research Terms and Conditions ("RTCs") of the Federal Awarding Agency, as referenced in Attachment 2. The parties further agree that they intend this Subaward to comply with all applicable laws, regulations and requirements.

By an Authorized Official of Pass-through Entity:

Kristi Trail

02/15/2019

Name: Kristi Trail, P.E.

Date

Title: Executive Director

By an Authorized Official of Subrecipient:

Tami Jenniskens

2/16/2019

Name: Tami Jenniskens

Date

Title: Associate Director, Sponsored Projects Admin.

Agreement ID: FPSA01-MX00D68218

FDP Data Transfer and Use Agreement ("Agreement")

Provider: The Administrators of the Tulane Educational Fund		Recipient: Lake Pontchartrain Basin Foundation	
Provider Scientist Name: Maureen Lichtveld, MD MPH Email: mlichtve@tulane.edu		Recipient Scientist Name: Brady Skaggs, PhD Email: brady@saveourlake.org	
Agreement Term Start Date: Date of last signature below End Date: Three (3) Years after the Start Date		Project Title: Gulf of Mexico Program Attachment 2 Type: Limited Data Set	
Terms and Conditions			
<ol style="list-style-type: none"> 1) Provider shall provide the data set described in Attachment 1 (the "Data") to Recipient for the research purpose set forth in Attachment 1 (the "Project"). Provider shall retain ownership of any rights it may have in the Data, and Recipient does not obtain any rights in the Data other than as set forth herein. 2) If applicable, reimbursement of any costs associated with the preparation, compilation, and transfer of the Data to the Recipient will be addressed in Attachment 1. 3) Recipient shall not use the Data except as authorized under this Agreement. The Data will be used solely to conduct the Project and solely by Recipient Scientist and Recipient's faculty, employees, fellows, students, and agents ("Recipient Personnel") and Collaborator Personnel (as defined in Attachment 3) that have a need to use, or provide a service in respect of, the Data in connection with the Project and whose obligations of use are consistent with the terms of this Agreement (collectively, "Authorized Persons"). 4) Except as authorized under this Agreement or otherwise required by law, Recipient agrees to retain control over the Data and shall not disclose, release, sell, rent, lease, loan, or otherwise grant access to the Data to any third party, except Authorized Persons, without the prior written consent of Provider. Recipient agrees to establish appropriate administrative, technical, and physical safeguards to prevent unauthorized use of or access to the Data and comply with any other special requirements relating to safeguarding of the Data as may be set forth in Attachment 2. 5) Recipient agrees to use the Data in compliance with all applicable laws, rules, and regulations, as well as all professional standards applicable to such research. 6) Recipient is encouraged to make publicly available the results of the Project. Before Recipient submits a paper or abstract for publication or otherwise intends to publicly disclose information about the results of the Project, the Provider will have thirty (30) days from receipt to review proposed manuscripts and ten (10) days from receipt to review proposed abstracts to ensure that the Data is appropriately protected. Provider may request in writing that the proposed publication or other disclosure be delayed for up to thirty (30) additional days as necessary to protect proprietary information. 			

Agreement ID: FPSA01-MX00D68218

- 7) Recipient agrees to recognize the contribution of the Provider as the source of the Data in all written, visual, or oral public disclosures concerning Recipient's research using the Data, as appropriate in accordance with scholarly standards and any specific format that has been indicated in Attachment 1.
- 8) Unless terminated earlier in accordance with this section or extended via a modification in accordance with Section 13, this Agreement shall expire as of the End Date set forth above. Either party may terminate this Agreement with thirty (30) days written notice to the other party's Authorized Official as set forth below. Upon expiration or early termination of this Agreement, Recipient shall follow the disposition instructions provided in Attachment 1, provided, however, that Recipient may retain one (1) copy of the Data to the extent necessary to comply with the records retention requirements under any law, and for the purposes of research integrity and verification.
- 9) Except as provided below or prohibited by law, any Data delivered pursuant to this Agreement is understood to be provided "AS IS." PROVIDER MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE USE OF THE DATA WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS. Notwithstanding, Provider, to the best of its knowledge and belief, has the right and authority to provide the Data to Recipient for use in the Project.
- 10) Except to the extent prohibited by law, the Recipient assumes all liability for damages which may arise from its use, storage, disclosure, or disposal of the Data. The Provider will not be liable to the Recipient for any loss, claim, or demand made by the Recipient, or made against the Recipient by any other party, due to or arising from the use of the Data by the Recipient, except to the extent permitted by law when caused by the gross negligence or willful misconduct of the Provider. No indemnification for any loss, claim, damage, or liability is intended or provided by either party under this Agreement.
- 11) Neither party shall use the other party's name, trademarks, or other logos in any publicity, advertising, or news release without the prior written approval of an authorized representative of that party. The parties agree that each party may disclose factual information regarding the existence and purpose of the relationship that is the subject of this Agreement for other purposes without written permission from the other party provided that any such statement shall accurately and appropriately describe the relationship of the parties and shall not in any manner imply endorsement by the other party whose name is being used.
- 12) Unless otherwise specified, this Agreement and the below listed Attachments embody the entire understanding between Provider and Recipient regarding the transfer of the Data to Recipient for the Project:
 - I. Attachment 1: Project Specific Information
 - II. Attachment 2: Data-specific Terms and Conditions
 - III. Attachment 3: Identification of Permitted Collaborators (if any)
- 13) No modification or waiver of this Agreement shall be valid unless in writing and executed by duly-authorized representatives of both parties.

Agreement ID: FPSA01-MX00D68218

14) The undersigned Authorized Officials of Provider and Recipient expressly represent and affirm that the contents of any statements made herein are truthful and accurate and that they are duly authorized to sign this Agreement on behalf of their institution.

By an Authorized Official of Provider:

Tami Jenniskens 2/8/2019
Date

Name: Tami Jenniskens

Title: Associate Director, Sponsored Projects Admin.

Contact Information for Formal Notices:

Name: Administrators of the Tulane Educational Fund

Address: 1430 Tulane Avenue, Box 8915, New Orleans, LA 70112-2699

Email: tjennis@tulane.edu

Phone: 504-988-5615

By an Authorized Official of Recipient:

Name: Kristi Trail, PE

Date

Title: Executive Director

Contact Information for Formal Notices:

Name: Lake Pontchartrain Basin Foundation

Address: 2045 Lakeshore Drive, CERM Bldg #339
New Orleans, LA 70122-3534

Email: kristi@saveourlake.org

Phone: 504-836-2215

Agreement ID: FPSA01-MX00D68218

Attachment 1
Data Transfer and Use Agreement
Project Specific Information

1. Description of Data:

The data governed under this agreement will be obtained by personnel of the Administrators of the Tulane Educational Fund (dba Tulane University) as part of the Gulf of Mexico Program (Award 00D68218) under Fixed Price Subaward Agreement No. FPSA01-MX00D68218. Data will consist of both human subjects data and non-human subjects data (environmental data). Human subjects data will consist of transcripts of interviews with local leaders (e.g., elected or appointed officials, leaders of community organizations, government employees) and transcripts of two focus groups with up to 20 residents living in St. Tammany Parish, Louisiana. Environmental data will consist of results of analysis of up to 200 water samples from St. Tammany Parish for fecal indicators and enteric pathogens.

**2. Description of Project:**

Recipient will use the data for the purpose of meeting obligations for an award from the Environmental Protection Agency (#00D68218). The Recipient seeks to improve surface waters in residential communities utilizing aerated treatment units for wastewater management. The project will assess water quality, waterborne pathogens, and vectors of human diseases and also will correlate these parameters, intervene to improve conditions, and educate area residents and community leaders. Recipient is permitted to link the data to other data sets.

Recipient personnel and Provider personnel will co-author any papers or abstracts for publication based upon this project's data.

3. Provider Support and Data Transmission:

Provider shall transmit the Data to Recipient: (select one) ☒ electronically or ☐ by mail to:

Name:	Brady Skaggs, PhD
Address:	2045 Lakeshore Drive, CERM Bldg #339 New Orleans, LA 70122-3534
Email:	brady@saveourlake.org
Phone:	504-836-2235

Agreement ID: FPSA01-MX00D68218

Upon execution of this Agreement, Provider shall send any specific instructions necessary to complete the transfer of the Data to the contact person listed above, if not already included below in this section of Attachment 1.

Human subjects data will consist of written transcripts in Microsoft Word documents. Environmental data will be made available in Microsoft Excel spreadsheets. Any data dictionaries or codebooks that the Provider might create will be provided to the Recipient. Provider will be available to assist Recipient with questions about the data structure. If errors are discovered in the data by either the Recipient or the Provider, the Provider will correct and re-send the data files to the Recipient.

4. Reimbursement of Costs:

☐

None

☐

As governed by a separate written agreement between the parties

Reimbursement Agreement Reference # (if required):

☒

As set forth herein:

The Provider's costs of preparing and transferring data to Recipient are governed under Fixed Price Research Subaward Agreement No. FPSA01-MX00D68218.

5. Disposition Requirements upon the termination or expiration of the Agreement:

Recipient should follow the Environmental Protection Agency's terms and conditions about data retention and disposal.

Agreement ID: FPSA01-MX00D68218

Attachment 2
Data Transfer and Use Agreement
Data-specific Terms and Conditions:
Limited Data Set

Additional Terms and Conditions:

1. Nothing herein shall authorize the Recipient to use or further disclose the Data in a manner that would violate the requirements of Provider under 45 CFR 164.514.
2. Recipient shall not use or further disclose the Data other than as permitted by this Agreement or as otherwise required by law.
3. Recipient shall report to the Provider any use or disclosure of the Data not provided for by this Agreement within 5 business days of when it becomes aware of such use or disclosure.
4. Provider is a HIPAA Covered Entity, and the Data will be a Limited Data Set as defined by the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"). In accordance with Section 164.514(e)(2) of the HIPAA Privacy Rule, the Data shall exclude the following direct identifiers of the individual or of relatives, employers, or household members of the individual:
 - (i) Names;
 - (ii) Postal address information, other than town or city, State, and zip code;
 - (iii) Telephone numbers;
 - (iv) Fax numbers;
 - (v) Electronic mail addresses;
 - (vi) Social security numbers;
 - (vii) Medical record numbers;
 - (viii) Health plan beneficiary numbers;
 - (ix) Account numbers;
 - (x) Certificate/license numbers;
 - (xi) Vehicle identifiers and serial numbers, including license plate numbers;
 - (xii) Device identifiers and serial numbers;
 - (xiii) Web Universal Resource Locators (URLs);
 - (xiv) Internet Protocol (IP) address numbers;
 - (xv) Biometric identifiers, including finger and voice prints; and
 - (xvi) Full face photographic images and any comparable images.If the Data being provided is coded, the Provider will not release, and the Recipient will not request, the key to the code.
5. Recipient will not use the Data, either alone or in concert with any other information, to make any effort to identify or contact individuals who are or may be the sources of Data without specific written approval from Provider and appropriate Institutional Review Board approval, if required pursuant to 45 CFR 46. Should Recipient inadvertently receive identifiable information or otherwise identify a subject, Recipient shall promptly notify Provider and follow Provider's reasonable written instructions, which may include return or destruction of the identifiable information.
6. By signing this Agreement, Recipient provides assurance that relevant institutional policies and applicable federal, state, or local laws and regulations (if any) have been followed, including the completion of any IRB or ethics review or approval that may be required.
7. The parties agree to take such action as is necessary to amend this Agreement, from time to time, in order for the Provider to remain in compliance with the requirements of HIPAA.

Agreement ID: FPSA01-MX00D68218

Attachment 3
Data Transfer and Use Agreement
Identification of Permitted Collaborators (if any)

For all purposes of this Agreement, the definition of "Collaborator Personnel" checked below will pertain:



"Collaborator Personnel" means: None. No collaborators are permitted on the Project.

-OR-



"Collaborator Personnel" means as set forth below and agreed upon between the Parties:

Subrecipient Indirect Cost Rate Agreement

COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1720423889A2

DATE: 11/19/2018

ORGANIZATION:

FILING REF.: The preceding
agreement was dated
02/06/2018

Tulane University

7029C Freret St.

New Orleans, LA 70118-5698

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)				
<u>EFFECTIVE PERIOD</u>				
<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%) LOCATION</u>	<u>APPLICABLE TO</u>
PRED.	07/01/2017	06/30/2019	50.50 On Campus	Organized Research
PRED.	07/01/2019	06/30/2020	51.50 On Campus	Organized Research
PRED.	07/01/2020	06/30/2021	52.00 On Campus	Organized Research
PRED.	07/01/2017	06/30/2021	33.40 On Campus	Other Sponsored Activities
PRED.	07/01/2017	06/30/2021	26.00 Off Campus	All Programs
PROV.	07/01/2021	Until Amended		Use same rates and conditions as those cited for fiscal year ending June 30, 2021.

*BASE

ORGANIZATION: Tulane University

AGREEMENT DATE: 11/19/2018

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

ORGANIZATION: Tulane University

AGREEMENT DATE: 11/19/2018

SECTION I: FRINGE BENEFIT RATES**

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
FIXED	7/1/2018	6/30/2019	23.20 All		Uptown Faculty
FIXED	7/1/2018	6/30/2019	24.20 All		Uptown Staff
FIXED	7/1/2018	6/30/2019	5.10 All		Uptown Fac-Sum
FIXED	7/1/2018	6/30/2019	18.90 All		HSC Faculty
FIXED	7/1/2018	6/30/2019	26.80 All		HSC Staff
FIXED	7/1/2018	6/30/2019	17.00 All		HSC Physicians
FIXED	7/1/2018	6/30/2019	4.40 All		HSC FPP
FIXED	7/1/2018	6/30/2019	16.90 All		HSC Residents
FIXED	7/1/2018	6/30/2019	3.90 All		Students & PT Staff
FIXED	7/1/2018	6/30/2019	16.30 All		Post Docs
FIXED	7/1/2019	6/30/2020	19.30 All		Uptown Faculty
FIXED	7/1/2019	6/30/2020	21.70 All		Uptown Staff
FIXED	7/1/2019	6/30/2020	4.90 All		Uptown Fac-Sum
FIXED	7/1/2019	6/30/2020	18.80 All		HSC Faculty
FIXED	7/1/2019	6/30/2020	25.00 All		HSC Staff
FIXED	7/1/2019	6/30/2020	15.80 All		HSC Physicians
FIXED	7/1/2019	6/30/2020	4.70 All		HSC FPP
FIXED	7/1/2019	6/30/2020	18.70 All		HSC Residents
FIXED	7/1/2019	6/30/2020	9.10 All		Students & PT Staff
FIXED	7/1/2019	6/30/2020	14.20 All		Post Docs
PROV.	7/1/2020	6/30/2023			Use same rates and conditions as those cited for fiscal year ending June 30, 2020

** DESCRIPTION OF FRINGE BENEFITS RATE BASE:

Salaries and wages.

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SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s) the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.

Equipment Definition -

Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of \$2,500 or more per unit.

FRINGE BENEFITS:

FICA

Retirement

Worker's Compensation

Life Insurance

Unemployment Insurance

Health Insurance

Tuition Remission

Early Retirement Payout

Sabbatical Leave

Termination Pay

Day Care Subsidy

Your next fringe benefit proposal based on actual costs for the fiscal year ending 06/30/2019 is due in our office by 12/31/2019.

Your next indirect cost proposal based on actual costs for the fiscal year ending 06/30/2020 is due in our office by 12/31/2020.